and overcome the effects of under-valuation of vaccination on a global scale.
METHODS: Estimates of vaccine-preventable cases worldwide, vaccine coverage levels, disease incidence, vaccine costs and cost-effectiveness were obtained through in a four-stage process. First, an electronic document search was conducted. Second, government documents and academic publications were reviewed. Third, academic and government experts in vaccine cost-effectiveness were contacted to obtain several estimates. Fourth, the epidemiological and economic data obtained from the first two stages were converted to the following common units: US$, LYS, deaths, QALYs, and DALYs, to allow for further economic analyses of the value of vaccination.
RESULTS: Disease: Direct or indirect savings Smallpox $300 million in direct costs per year; Polio US$13.6B in total savings worldwide; Measles US$10 per DALY Cholera $770 million; Malaria $100B GDP lost per year in Africa; MMR $100 million direct medical costs; DTPa $23.6B direct and indirect costs; Hib $5B direct, $12B indirect costs in US.
CONCLUSIONS: Vaccines are unquestionably one of the most cost-effective public health measures available, yet they are undervalued and underutilized throughout the world. It is important for international agencies, governments, and health policy makers to keep this preventive measure in the spotlight. It is important to remind parents, the general population, and health care providers worldwide to take advantage of this life-saving measure so that no one will suffer diseases that can so easily be prevented.

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AN EPIDEMIOLOGICAL EXAMINATION OF MEDICATION RESOURCE USE AND COSTS AMONG THE INSURED ELDERLY

Alemayehu B, Aubert RE, Epstein R
Merck-Medco Managed Care, LLC, Franklin Lakes, NJ, USA

OBJECTIVE: The objective of this study is to describe the demographic profiles, drug costs, medication utilization, and chronic disease characteristics of the insured elderly population in the United States, with particular emphasis on those with high outpatient drug expenses.
METHODS: Prescription claims data from the Merck-Medco National Probability Sample Database, a 10% stratified random sample of continuously eligible lives covered by Merck-Medco during 2000, was used for the analysis.
RESULTS: 495,260 insured elderly (age > = 65) were identified in the sample database. Demographically, 49.7% were female, the mean age was 75.8 years (sd 7.5) and they were predominantly from Middle Atlantic (23.5%) and South Atlantic (23.3%) regions of the country. Seventy-seven percent filled one or more prescriptions (range 1–480 prescriptions per person per year) and this number varied significantly by age and region. Fifty-five percent of elderly patients filled prescriptions for conditions related to the cardiovascular system, 22.0% for the endocrine, 19.4% for the GI, 19.0% for the CNS and 9.0% for the respiratory system. In terms of expenditure (expressed in Average Wholesale Price), 32.5% of the total expenditure was for cardiovascular medications, 10.4% for GI, 5.6% for endocrine and 3.5% for respiratory medications. Overall, 10.4% of the elderly had a medication expenditure of $4,000 or more, 38.8% had expenditures between $1,000 and $4,000, 27.7% had cost that averaged $443 and the remaining 23.0% had no drug expenditure during 2000. Regression model analyses revealed that increasing age (p-value = 0.04), female gender (p-value < 0.01), and residence in Middle Atlantic, New England or Pacific regions (p-value < 0.01) were significant and independent risk factors for increasing medication costs.
CONCLUSIONS: There are demographic and chronic conditions associated with higher medication utilization that are important to consider when developing a policy for national prescription drug coverage for the elderly.

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FACTORS ASSOCIATED WITH OUT-OF-POCKET PRESCRIPTION DRUG COSTS

Kumar RN, Taylor SD, Mckercher PL
University of Michigan, Ann Arbor, MI, USA

Prescription drug coverage issues have generated considerable attention within health care and political agendas. To allocate scarce resources efficiently, it is important to identify the characteristics of individuals with the highest level of out-of-pocket expenditures for prescription medications.
OBJECTIVE: To identify factors explaining the variance associated with individual out-of-pocket prescription drug costs.
METHODS: We analyzed data from the household component and event files of the 1996 Medical Expenditure Panel Survey (MEPS), with brand-generic status information obtained from MULTUM®. Of the 22,601 individuals, 14,015 (62%) incurred prescription expenditures. Out-of-pocket prescription costs were regressed on demographic factors, socioeconomic factors, perceived health status, type of health insurance coverage, perceived access to care, prescription drug characteristics, and health care cost data. Person level weights were included in the regression model. Variance estimation was performed to adjust for the complex survey design employed by MEPS.
RESULTS: The mean out-of-pocket prescription drug cost was $166 (se = 4.61). Minorities had lower out-of-pocket costs ($117, se = 7.87) compared to Caucasians ($175, se = 5.05), whereas uninsured consumers had greater out-of-pocket costs ($181, se = 20.29) compared to consumers with private insurance ($156, se = 4.76). Significant (alpha = 0.05) predictors with positive coeffi-